DERESTRICTED
~~CONFIDENTIAL~~

AIR MINISTRY

M.R.P.91
20 April 1943

METEOROLOGICAL RESEARCH COMMITTEE

LONG RANGE FORECASTS

~~SECRET~~

Notes on the Results of Statistical Forecasts.

by

C.E.P.Brooks.

METEOROLOGICAL OFFICE
23 MAY 1944
LIBRARY

1. Test of forecasting by similar cases.

Two examples were selected:

(a) February 1919 and January 1936. Both months gave for the mean distribution very similar charts with high pressure in the north. The daily pressures for Jan.12-31, 1936 and Feb.9-28, 1919 gave the following correlations:

Kew +·83, Reykjavik +·16, Spitzbergen +·27, Eugspitze +·62.

For the next following ten days the correlation coefficients were:

Kew +·44, Reykjavik -·59, Spitzbergen +·29.

(b) December 1931 and November 1922. Both months had an anticyclonic type over the British Isles. The daily pressures for Dec.12-31, 1931, Nov. 14-Dec.3, 1922, gave a correlation of +·62 at Kew. For the next ten days the coefficient at Kew was -·17.

These two examples show that even a close relation over 20 days is as likely as not to be reversed during the next 10 days.

2. Test of forecasting by assuming normal values.

The 3-day means of pressure at Reykjavik, Kew and Horta in 1942 were correlated with the 20 year normals for 1919-38, the year being divided into sections of two months each to eliminate (sufficiently for practical purposes) the annual variation. In addition the 3-day means for the periods covered by the various "singularities" were picked out and correlated with the 20-year means, after eliminating annual variation. The results are as follows:

P 9015

~~SECRET~~

Station	Jan-Feb	Mar-Apr	May-June	July Aug	Sept Oct	Nov-Dec	Year	Singularities
Reykjavik	+·41	+;42	-·49	+·21	-·11	+·05	+·17	+·28
Kew	+·47	-·36	-·06	-·07	+·49	-·19	+·13	+·24
Horta	+·22	+·18	-·08	+·33	-·18	+·35	+·13	+·22

The figures for the "year" are weighted according to the standard deviations of the variations in the separate two-monthly periods, and are therefore comparable with the figures for "Singularities". The latter are the larger in each case, suggesting that in 1942 at least there was some tendency for the "Singularities" to occur at about the normal times.